Gaming growth in Clark County, Nevada: A life cycle study

David Scott Frankhouser
University of Nevada, Las Vegas

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GAMING GROWTH IN CLARK COUNTY, NEVADA:
A LIFE CYCLE STUDY

by

David Scott Frankhouser

Bachelor of Arts
Washington & Lee University
1992

A thesis submitted in partial fulfillment
of the requirements for the

Master of Science Degree
William F. Harrah College of Hotel Administration

Graduate College
University of Nevada, Las Vegas
December 1999

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ABSTRACT

Gaming Growth in Clark County, Nevada:
A Life Cycle Study

by

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Professor of Hotel Administration
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The purpose of this study was to use product life cycle (PLC) theory to analyze the
growth of gaming in Clark County, Nevada. Historical data for the last 30 years,
provided by the Nevada Gaming Abstracts and the Las Vegas Convention and Visitors
Authority, allowed average casino revenues, hotel occupancy percentages, and visitor
statistics to be examined. Based on this analysis, Clark County can be described as in the
consolidation stage of Butler’s six-stage life cycle model. The information learned from
this study helps to show that gaming is a unique form of tourist destination. As such,
operators need to be especially aware of the factors that contribute to the success of an
area in order to remain competitive in the future.
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ACKNOWLEDGEMENTS

This study would never have come to fruition without the support, input and guidance of many individuals. First and foremost, I would like to thank my wonderful wife Denise. Without her constant support and encouragement this achievement would not have been possible. I would also like to thank my mother and father, who have always encouraged me in everything that I have done.

I would like to thank Todd Weinstein and Tom Wilkinson for their help in answering format questions. I would like to thank the members of my examination committee, Dr. Fried, Dr. Bosselman, and Dr. Schwer for their time and effort in helping me complete this study. Finally, I would like to express my gratitude to Dr. Bybee for his guidance and input throughout this research effort. His patience and the many hours that he devoted to helping develop this paper are greatly appreciated.
CHAPTER 1

THE PROBLEM AND ITS SETTING

Problem Statement

The purpose of this study was to analyze the growth of casinos in Clark County, Nevada over the past thirty years, and to compare this growth to Product Life Cycle (PLC) theory in an effort to determine the PLC stage of gaming and to suggest future macro-management strategy based upon that PLC stage.

Statement of Subproblems

In this study, the following subproblems were identified.

1. How can the growth of gaming in Clark County be measured?
2. Should Clark County be divided into specific geographic areas?
3. Are average total casino revenues an accurate indicator of the market potential for growth in Clark County?
4. Are average hotel occupancy percentages an accurate indicator of the market potential for growth in Clark County?
5. Do visitor statistics reflect the growth of casinos in Clark County, and do they coincide with the hotel occupancy percentages?
Hypotheses

As this study was exploratory in nature and there was not a standardized hospitality or casino life cycle model against which to gauge the growth of casinos in Clark County Nevada, the intent of this research was to gain a better understanding of the growth without testing any formal hypotheses. Hopefully throughout the course of this study the results of research will provide the opportunity to develop hypotheses and recommend future research considerations.

Delimitations

The scope of this study covers the growth of casinos over the last thirty years in Clark County, Nevada for the following two areas described in the Nevada Gaming Abstracts (1968-1998):

1. Clark County – Las Vegas Strip Area
2. Clark County – Downtown Las Vegas Area

The category breakdowns have changed over the years in the Nevada Gaming Abstracts (1968-1998) as more casinos have entered the marketplace, and as casinos have expanded in size and generated more revenue per property. This researcher will have to combine some current categories in order to obtain comparable data to that of categories that existed prior to 1990. A detailed breakdown of the previous and current categories that will be combined and compared will be provided in Chapter 3 (Methodology). Data from casinos that are not specifically covered in the above categories will not be considered in this study. While this will exclude many smaller casinos throughout Clark County, the
categories chosen contain the largest casinos, and are thought to be the most representative of the casinos in each geographic area of Clark County.

The original intention of this researcher was to include the “Boulder Strip” category mentioned in the *Nevada Gaming Abstracts* (1968-1998) as a way of measuring growth in the “Locals” market, but unfortunately this category was only created in 1990. As a result, comparable data was not available for the time span under consideration, and therefore this category was eliminated from consideration.

All other geographic categories mentioned in the *Nevada Gaming Abstracts* (1968-1998) will be excluded in this study, including, but not limited to, other counties, cities and regions in Nevada specifically mentioned in the Gaming Abstracts. In addition, this study does not intend to infer conclusions about any other gaming region, whether in the United States of America or abroad, and can not necessarily be used as a model due to the unique characteristics and proliferation of gaming in Clark County, Nevada.

Since the Strip and Downtown casinos typically market to different sections of the population, the intent of this research was to analyze each category individually in relation to life cycle theory. These individual results can then be compared to one another in order to draw conclusions about the overall growth of gaming in Clark County.

**Limitations**

The results of this study are limited to the accuracy of the data reported in the *Nevada Gaming Abstracts* (1968-1998). In addition, what specific data was published and how it was organized by the Gaming Control Board was beyond the control of this researcher. While the figures contained in these abstracts reflect the numbers officially reported to
the State of Nevada by the individual casinos for tax purposes and are thought to be true and accurate, this study does not claim to have verified these figures from any other source. In fact, to do so would be virtually impossible, as individual researchers do not have access to the private financial records of independently owned and operated casinos in Clark County.

This study was also limited by the fact that it was exploratory in nature. The use of the Product Life Cycle theory has never been used to analyze the growth of the casino industry in Clark County, Nevada. Therefore, literature about product life cycle theory was researched in related fields in an effort to draw inferences applicable to this study.

The final limitation on this study was the availability of long-term comparable data. Traditionally, product life cycle studies have been done over longer periods of time than that of the thirty-year period of this study. While a longer period of study may be beneficial to identifying long-term product life cycle trends, this study was limited by the fact that reliable comparable data only dates back thirty years. As a result, this study attempted to apply PLC theory to the growth of total revenues per casino as the “product” over this relatively short time frame in an effort to determine shorter-term trends in gaming growth.

Assumptions

Due to the exploratory nature of this study, this research will be conducted with a small number of assumptions on the part of the researcher.
1. Studying the growth of gaming in Clark County, Nevada over the last thirty years was a worthwhile pursuit that will lead to increased knowledge for both industry and education.

2. The time frame specified, from 1968 to 1998, was an appropriate time frame to study and was long enough to have applications to Product Life Cycle theory.

3. The Nevada Gaming Abstracts (1968-1998) are a reliable source of data for this study.

4. The data reported in the Nevada Gaming Abstracts (1968-1998) was appropriate and insightful as a way to apply PLC to the growth of Gaming in Clark County.

5. The two categories selected from the Nevada Gaming Abstracts (1968-1998) will adequately represent two major gaming geographic areas of Clark County: The Las Vegas Strip and Downtown Las Vegas.

The Importance of the Study

The continued growth of gaming in Clark County, Nevada over the last thirty years has caused skeptics, such as Berns (1998), to suggest that the gaming market is becoming overbuilt and saturated. On the other hand, casino developers continue to build, believing that the growth will continue to draw a larger and more diverse range of people (p. 38). By examining this growth and comparing it to the typical stages found in product life cycle theory, this researcher hopes to come to a better understanding of the current stage of growth of gaming in Clark County. This in turn will hopefully lead to forecasts about future gaming growth in Clark County and possible future research subjects.
Definition of Terms

The two geographic areas chosen for analysis, The Las Vegas Strip and Downtown Las Vegas, are not specifically defined in the *Nevada Gaming Abstracts* (1968-1998). The researcher spoke to Russell Guindon, Senior Research Specialist of the Nevada Gaming Control Board, who said that the Board was unable to disclose the specifics of each category due to the fact that to do so might allow individuals to determine confidential information provided by privately operated casinos. He said that the market share that the operators were intending to go after determined the categories in the Abstracts, and as such some casinos could be included in a category that was not an exact geographic match (Russell Guindon, personal communication, September 9, 1999). One possible example of this would be The Rio Hotel and Casino, which clearly caters to the Las Vegas Strip market share while being located on the other side of Interstate 15. With these stipulations kept in mind, the two categories can generally be defined as follows.

Las Vegas Strip

This category was defined as extending from the 6000 block of South Las Vegas Boulevard, near the new Mandalay Bay Hotel and Casino, to Sahara Avenue. Casinos need not be located directly on Las Vegas Boulevard to be included in this category. Casinos in this category are thought to market to various levels of the tourist market.

Downtown Las Vegas

This category was defined as casinos located north of Sahara Avenue and South of Interstate 95. The majority of the casinos in this category are on Fremont Street in the
downtown area. These casinos cater to various levels of the tourist and local resident market.

Group I Casinos

According to the data provided in the *Nevada Gaming Abstracts* (1968-1998), Group I casinos include those licensees with annual gross revenue of $1,000,000 or more.

Group II

According to the data provided in the *Nevada Gaming Abstracts* (1968-1998), Group II casinos include those licensees with annual gross revenue of less than $1,000,000.

Total Revenue

For the purpose of this study, total revenue was categorized in the *Nevada Gaming Abstracts* (1968-1998) as the sum of the revenues generated by the following departments: Casino, Rooms, Food, Beverage, and Other revenue generating departments (e.g. shows, retail).

Average Revenue Per Casino

The average revenue per casino was defined as the combined total revenue of all casinos in the category in question divided by the number of casinos in that category.
Hotel Occupancy Percentage

This was the average rate of hotel occupancy for the entire year reported by the Las Vegas Convention and Visitors Authority.

“Local’s Casino”

The term “local’s casino” refers to casinos that cater more to the permanent residents of Clark County. These casinos typically are not located in tourist areas and are convenient for local residents to frequent. Due to a lack of amenities (compared to tourist properties) local’s casinos can typically afford to be more generous in paybacks and therefore are attractive to the local player.

Product Life Cycle

Product Life Cycle (PLC) describes the life span of a product over time. At the most basic level this typically involves three stages: the “birth” or introduction of a product, the growth of that product or maturation, and the decline of the product leading to an eventual “death”. The stage of the life cycle that a product may be in can be used to help make advertising, production and marketing decisions both in the present and the future as a strategic planning tool.

Destination Life Cycle

A Destination Life Cycle takes the product life cycle theory and applies it to a tourist destination. This concept looks at a destination in terms of a life span and at a basic level goes through the same three stages as the product life cycle model. The use of
Destination Life Cycle can help in long-term tourism planning, strategies for land use, economic development and marketing for a destination (Getz, 1992).

Tourist Area Life Cycle

The Tourist Area Life Cycle may be very similar to the Destination Life Cycle in that it attempts to apply product life cycle theory to a specific area. While some authors use these terms interchangeably, the subtle difference would be that a Tourist Area Life Cycle focuses more on the tourist attractions located at a destination rather than focusing on the destination itself.

“Mega” Resort

Common term used to describe modern large casinos built since 1989. This new era of resorts was begun with the opening of the Mirage in November 1989. “Mega” resorts are built with larger casinos, typically between three to five thousand hotel rooms, and more entertainment and dining facilities than traditional Las Vegas casinos.

Paper Format

The following chapter of this paper reviews Product Life Cycle theory and related literature in an effort to emphasize related research concerns and methods. Chapter 3 details the methodology used in analyzing the historical data, while Chapter 4 describes the results of the study. Finally, Chapter 5 discusses those results and offers conclusions and recommendations for future research.
CHAPTER 2

REVIEW OF RELATED LITERATURE

This study arose from an overall interest in the growth of gaming in Clark County, Nevada. How to judge the growth, and what to compare it to became the next challenge. Using Product Life Cycle theory to analyze the growth will hopefully allow this researcher to uncover trends in data that will allow for informed comment to be made about the current and future state of the industry.

Before product life cycle concepts can be used to judge the current stage of gaming growth in Clark County, it was necessary to examine exactly what a Product Life Cycle was and how it relates to the gaming and hospitality industry. Following an overview of life cycle theory, a review of the general strengths and weaknesses will help highlight the pros and cons of the theory. Once an overall understanding of PLC has been gained, applications to the hospitality industry can be examined and different models can be described. The types of analysis done in various case studies will be examined in an effort to determine which methods would be most appropriate for this research effort. As there has been very little research done regarding gaming growth and the life cycle, especially in a market as large as Clark County, related literature done in smaller gaming markets and other areas of the hospitality industry help to emphasize related research concerns and methods. There are several different life cycle models (the difference
between them being the number and names of stages) that have been applied to the hospitality industry. Reviewing some of these allows the researcher to better determine the most appropriate model for this study. In addition, the various studies use different techniques in analyzing the results, and these will also be considered in determining the most appropriate methodology for this paper.

**What is Product Life Cycle (PLC)?**

At the most basic level, PLC has been used in the business sector to model the sales curve of a product over time as the product goes through four basic stages: product introduction, product growth, product maturity, and product decline. As the products go through these stages they typically follow an S shape curve as seen in Figure 1.

![Basic Product Life Cycle](image)

**Figure 1. Basic Product Life Cycle**
Di Benedetto and Bojanic (1993) note that PLC “hypothesizes that products have a limited life, profits rise and fall at different stages of the product life cycle, and products require different marketing strategies at each stage” (p. 558). By understanding the typical stages a product goes through, marketers can attempt to strategically market their product according to its stage in the life cycle. For instance, common sense would dictate spending more money on advertising during the introduction and growth stages and less during the maturity stage when the product has been firmly established. The idea here would be to understand where the product was in relation to the life cycle model so that marketing efforts can be directed accordingly. This basic life cycle concept will later be applied to tourist areas and more specifically gaming in Clark County, but first a more in depth look of how widely PLC has been used and the general strengths and weaknesses of the concept will help establish a solid understanding of the theory.

How Widely PLC Is Used

In addition to the important marketing issues that PLC can help highlight, PLC can also be used in strategic planning efforts and as a forecasting tool. In many ways strategic planning and forecasting go hand in hand as they are both trying to use knowledge of the life cycle stage to either help make current decisions (immediate strategic planning) or longer-term decisions (long term strategic planning or forecasting).

The use of life cycle stages in strategic planning for organizations was deemed as “crucial” in Tse and Elwood's 1990 article about the synthesis of the life cycle concept with strategy and management style (p. 223). The fundamental idea was that a business or organization goes through life cycle stages just as a product does, and that the stage an
organization finds itself in will determine the strategies they adopt. Sasser (1978) suggests that the life span of a service organization goes through five stages: the entrepreneurial stage, multisite rationalization, growth, maturity, and decline or regeneration. Furthermore, the stage an organization exists in can directly influence the strategic issues faced and the management style required for that stage (Low and MacMillan, 1988). As a result, understanding life cycle theory and an organization’s stage in that life cycle can be beneficial in the strategic planning process for an organization.

For longer-term planning and development the life cycle concept can be used as a forecasting tool. To use life cycle theory for forecasting, one should note that Coltman (1989) distinguishes life cycles in terms of time factors: short term (seasonal), mid-term (cyclic), and long-term (trend). In order to use life cycle theory for forecasting one needs to look at the long-term trend of the life cycle in order to attempt predictions for the future. This was in fact what was done in the Clark County study.

According to Haywood (1986) most forecasting models tend to examine the relationship between time and visitation and/or expenditure while not taking into consideration marketing strategy. He suggests that a more thorough forecasting model would include a series of forecasting curves that would reflect alternative strategies that take into account everything from marketing strategy to the actions and reactions of competing tourist areas. Haywood goes on to say that there are many tourist area life cycle models that are good at predicting the development stage and are poor at predicting the stagnation and decline stages. However, a model by Wilson (1969) focuses on the leading indicators that can help predict the timing of the stagnation stage:
• A declining proportion of first-time visitors versus return visitors
• Declining profits of major tourist businesses
• Tourism industry over capacity
• Appearance of new and accessible destinations
• Decline in elasticity of advertising coupled with increased price elasticity
• Present visitors' length of stay
• Style and period-of-life changes among prospective market segments

Specific indicators such as these will be helpful in analyzing the data in this study and in helping to determine the current stage of growth for Clark County.

General Strengths and Weaknesses of Life Cycle Theory

The use of life cycle theory for strategic planning and forecasting can certainly be seen as strengths of the concept. Life cycle theory allows patterns to be seen in long-term statistics that certainly indicate implications for the future. However, while many researchers acknowledge that PLC theory has been effective in describing the pattern of sales or general trends (Di Benedetto and Bojanic, 1993; Cooper and Jackson, 1989), they also point out the limitations of life cycle theory. These limitations, as well as other general concerns, will be detailed in this section.

One of the main limitations of life cycle theory as it relates to a tourist destination would be that a destination's growth can be influenced by and susceptible to many external forces. Haywood (1986) does an excellent job of breaking down the seven external forces that can effect the evolution of a tourist area:

• Rivalry among existing tourist areas
• Developers and development of new tourist areas
• Substitutes for the tourism/travel experience
• Environmentalists and concerned publics who oppose tourism or tourism development
• Transportation companies, tour operators, travel intermediaries, accommodation and suppliers—their bargaining power.
• Tourists—their needs, wants, perceptions, expectations and price sensitivity
• Governmental, political and regulatory bodies and forces

Haywood (1986) goes on to say that, “any significant change in these seven underlying forces will have considerable impact on a tourist area” (p. 166). Some hypothetical examples may help to demonstrate the impact of outside forces. Imagine if the Nevada State Government decided to outlaw gaming in Las Vegas—such a decision would certainly have an impact on the ability of Las Vegas to draw tourists. How about if the airlines suddenly decided to scale back to half of the number of flights that they send to Las Vegas? Certainly decreased numbers of flights would dramatically impact Las Vegas revenues. One situation currently threatening to steal customers away from Las Vegas would be the proposed Indian Gaming facilities in California. Californians would probably be far less likely to drive the four hours to Las Vegas if they have a similar gaming product offered closer to home. The point here would be that with so many outside influences on the growth and success of a tourist destination, trying to accurately forecast the future with life cycle theory (or with any other forecasting technique for that matter) can be a difficult task due to the unpredictability of the external influences on the marketplace.
Another influence that can impact the tourist area life cycle model are management
decisions made by the operators in the tourist destination. Tse and Elwood (1990) point
out that the management style of the organizational leader can impact on the life cycle of
an individual organization. This in turn can impact the life cycle of the destination. For
example, few would argue that the influence of Steve Wynn in Las Vegas and Donald
Trump in Atlantic City have not impacted those tourist destinations. Entrepreneurs such
as these can have a big impact on a destination in terms of building, capital infusion, and
marketing. Debbage (1990) examines the impact of competitive structure on the resort
cycle with an emphasis on the long-term impact of mergers and acquisitions.

One last concern for using life cycle theory as a forecasting tool involves managers
using PLC as a predictor of what will happen or as a guide to prescribing appropriate
strategy. (Day, 1986) If managers rely too heavily on a declining forecast, then they run
the risk of “managing for decline” (Di Benedetto and Bojanic, 1993, p. 558). The fear
would be that if managers try and manage for decline then the product will surely decline.
A better strategy when faced with a forecast for decline would be to attempt to revitalize
the product or extend the maturity stage rather than accept decline without a fight.

The Utility of the Life Cycle as a Descriptive Tool

Besides being used in strategic planning and forecasting, the life cycle concept can
also be used as a descriptive tool. Cooper and Jackson (1989) acknowledge the
aforementioned criticisms of life cycle theory, and suggest that the difficulties lie in
predicting the changing pattern of visitor numbers and product sales. However, they go
on to suggest that:

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If this pattern is taken not as an independent variable but as one dependent upon marketing and managerial action, then the life cycle can be used as an analytical framework to examine the evolution of tourist destinations within their complex economic, social, and cultural environments (p. 382).

In other words, they suggest examining the actual changes that have occurred and how they impact the stage of the life cycle rather than trying to determine what exactly caused the changes to take place. Using life cycle theory in this broader sense makes the examination of destination's life cycle more feasible. Cooper and Jackson conclude by suggesting that, "the tourist area life cycle provides an enlightening descriptive tool for understanding how destinations and their markets evolve" (1989, p. 383).

The Three, Four, and Six Stage Life Cycle Models

There are several different life cycle models that have been used to describe tourism in general, the tourist product and tourist destinations. The three-stage model popularized by Gilbert (1939) and Christaller (1963) divides the evolution of resorts into the discovery stage, the growth stage, and the decline stage. There was also a four-stage model discussed by Goncalves and Aguas (1997) that more closely mirrors the stages of an actual product consisting of an introduction stage, growth stage, maturity stage, and a decline stage. However, by far the most popular model for describing tourism and destination life cycles has been the six-stage model developed by Butler in 1980 and referred to by Di Benedetto and Bojanic (1993), Choy (1992), Cooper and Jackson (1989), Debagge (1990), Getz (1992), Goncalves and Aguas (1997), and Haywood (1986). The six stages in this model are broken down as follows: exploration,
involvement, development, consolidation, stagnation, and poststagnation (either stabilization, rejuvenation, or decline) (Butler, 1980). The six-stage model also follows the basic “S” shape, however at the top of the curve Butler offers a variety of outcomes for the “poststagnation” stage depending on whether or not the tourist area in question either stabilizes, rejuvenates itself or declines as seen in Figure 2.

![Figure 2. Butler's Six Stage Life Cycle Model.](image)

In figure 2, Butler describes five possible outcomes (A-E) and provides examples for each. He suggests that Atlantic City, following a period of growth and expansion, provides a nice example of Curve A. Curve B would indicate a tourist area that has adjusted to capacity levels and could allow continued growth at a reduced rate. Curve C
demonstrates that after an initial adjustment downwards, a more stable level of visitation can be maintained at all capacity levels. Curve D shows a marked decline in visitation levels probably brought on by the failure to replace resources, the overuse of existing resources, and not remaining competitive with other markets. Finally Curve E demonstrates the effect of catastrophic events such as war and disease which would result in an immediate decrease in the number of visitors (Butler, 1980, p.11).

As Butler’s six-stage model will be the model used to judge the growth of gaming in Clark County, a breakdown of the indicators of each stage will be helpful in applying the model to this research effort. The following table by Getz (1992, p. 763) concisely outlines the stages and indicators of the Butler study:

Table 1

The Six-Stage Life Cycle Model with Stage Indicators

<table>
<thead>
<tr>
<th>Exploration</th>
<th>Involvement</th>
<th>Development</th>
</tr>
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<tr>
<td>Small numbers of “explorers”</td>
<td>Local investment in tourism</td>
<td>Rapid growth in visitation</td>
</tr>
<tr>
<td>Little or no tourist infrastructure</td>
<td>Pronounced tourist season</td>
<td>Visitors outnumber residents</td>
</tr>
<tr>
<td>Natural or cultural attractions</td>
<td>Advertising the destination</td>
<td>Well-defined market area</td>
</tr>
<tr>
<td></td>
<td>Emerging market area</td>
<td>Heavy advertising</td>
</tr>
<tr>
<td></td>
<td>Public investment in infrastructure</td>
<td></td>
</tr>
</tbody>
</table>

(Table continues)
Table 1 (continued)

Development (continued)
-External investment leads to loss of local control
-Man-made attractions emerge to replace natural or cultural

Consolidation
-Slowing growth rates
-Extensive advertising to overcome seasonality and develop new markets
-Residents appreciate the importance of tourism

Stagnation
-Peak visitor numbers reached
-Capacity limits reached
-Resorts image divorced from the environment
-Area no longer fashionable
-Heavy reliance on repeat trade
-Low occupancy percentages
-Frequent ownership changes
-Development peripheral to original developments

Decline
-Spatial and numerical decrease in markets
-A move out of tourism; local investment might replace abandonment by outsiders
-Tourism infrastructure is run-down and might be replaced by other uses

Rejuvenation
-Completely new attractions replace original lures or new natural resources used

Source: Getz, 1992

By comparing the events that have taken place in Clark County to a table such as this the stages that gaming growth has gone through will hopefully become more apparent. Butler’s six-stage model allows for a more in depth use of the life cycle concept and seems to be the most appropriate model to use for this research effort.
The Six Decisions To Be Made When Using PLC

Having determined that the six-stage model would be the most appropriate model to use in this research effort, how to make the best use of the model needs to be considered. Haywood (1986, p.155) suggests that in order to make the tourist-area life cycle operational, six major conceptual and measurement decisions need to be considered:

- Unit of Analysis;
- Relevant Market;
- Pattern and Stages of the tourist area of life cycle;
- Identification of the area’s shape in the life cycle;
- Determination of the unit of measurement; and
- Determination of the relevant time unit.

Haywood goes on to provide a detailed description of each decision that needs to be made. The following provides a brief summary of these descriptions, which will help to clarify what exactly each of these decisions involves.

(1) Unit of Analysis

The first decision to be made involves defining the tourist area to be examined. Will the area be a geographic area, a city, a town, part of a city, or individual types of tourist attractions within a particular area? Haywood describes this as the most important decision to be made and he expresses the need to be specific. For example, when examining lodging, should hotels and motels be included? Should campsites be included? Should the size of the hotel/motel be a factor? (p. 156) These are all important considerations that will impact the outcome of the life cycle model and need to be carefully considered.
(2) Relevant Market

The second decision to be made involves the relevant market to be considered. Here, Haywood warns that one cannot assume that the tourist market is homogeneous and composed of only one segment. He concedes that most studies focus on total visitation, but suggests that in certain instances breaking the total figures into market segments can be beneficial. For instance, examining domestic versus international tourists, business versus pleasure travelers, and travel agent bookings versus independent bookings may be appropriate and important to the research (p. 156).

(3) Pattern and stages of tourist-area life cycle

The third decision that Haywood considers focuses on the usefulness of the life cycle graph. While he acknowledges the classic “S” shape curve mentioned earlier, he also suggests that other shapes are possible in illustrating a life cycle, shown in Figure 3. The first graph in Figure 3 illustrates a well-managed tourist area that continues to attract a consistent number of visitors. Graph number two in the figure above illustrates an “instant resort” (Butler, 1980) that becomes instantly popular and has strong drawing power. Graph number three illustrates an area that has peaks and dips in visitation that may be attributed to outside influences. The last graph in Figure 3, number four, depicts a successful rejuvenation of a market due to the addition of a new popular attraction. Haywood uses Atlantic City’s introduction of gaming as an example of how a graph could take that shape.
Figure 3. Alternate Tourist Area Life Cycle Options

Source: (Haywood, 1986, p. 157)

(4) Identifying tourist area’s stage in the life cycle

According to Haywood, there are two key questions when attempting to use the tourist-area life cycle concept. The first would be how to determine the stage of the tourist area, and the second was how to determine when a tourist area moves from one stage to another (1986, p. 157-158). Having argued that the “S” shaped curve was not the only possible life cycle pattern, Haywood suggests that simply looking at the historical number of visitors may not adequately clarify a tourist area’s position in the life cycle.
and its shift from one stage to another. Therefore he suggests another approach (Figure 4) based on the change in the number of tourists from one year to the next. Specifically

![Diagram showing tourist area life cycle stages.](image)

**Figure 4. Identifying Tourist Area Life Cycle Stages**

Source: Haywood, 1986

he examines the percentage change from year to year in the number of tourists and analyzes the results using the graphic in Figure 4. According to this graph, if a tourist area has a percentage change of less than −0.5, then it can be classified as in the decline stage. A percentage change between −0.5 and +0.5 can be classified as the stagnation and consolidation stages, and a percentage change over +0.5 can be seen as being in the growth or development stage. Haywood stresses the importance of being able to
determine exactly when a shift was made in the tourist area life cycle as this directly relates to the use of the life cycle for forecasting visitation rates, market acceptance and the actions of competitive forces (p. 158).

This presents an interesting concept and will be attempted when analyzing the visitation figures for Clark County. The downside of this model would be fluctuations from year to year. Suppose that a tourist area’s percentage change continually changed dramatically from one year to the next; it may be hard to determine the life cycle stage. Furthermore, while this model may work nicely for tourist visitation figures, using it for average revenue figures may not be appropriate over a long time span due to rates of inflation. However, with that said, the potential usefulness of this model remains appealing and will be tested on this research effort.

(5) Determining the Unit of Measurement

The fifth consideration Haywood discusses in making the tourist-area life cycle operational concerns the capacity of the area and how that capacity was perceived. For instance, Haywood (1986, p. 159) suggests that should the number of tourists be used as a measure, that the following ameliorating variables should be considered:

- The Length of Stay
- Dispersion of Tourists Within and Throughout the Tourist Area
- Characteristics of the Tourist
- The Time of Year in Which the Visit is Made

Another issue that Haywood addresses was the concept of using a tourist expenditure model rather than just a tourist population model to better determine the shape, pattern
and stage of the life cycle. The basic idea here was that simple visitor statistics may not be an accurate indication of tourist-area profitability. For instance, if the tourists are spending more money per capita, then it will take less total tourists to maintain profitability, and therefore, looking solely at the number of visitors would not be an accurate indicator of the life cycle stage. Haywood goes on to acknowledge the difficulties of a common measure of profitability, and concedes that this may be difficult to adjust for current economic conditions. This was essentially the same problem this researcher found with the “Identifying tourist areas stage in the life cycle” model based on the percentage of change from one year to the next. Nonetheless, despite the challenges of finding a common measure of profitability, the determination of such figures would undoubtedly help in assessing an area’s stage in the life cycle.

(6) Determining the Relevant Time Unit

The last decision Haywood considers in the use of the life cycle model was the time unit used. He acknowledges that while most studies focus on annual data, it may be more appropriate develop a tourist-area cycle based on quarterly or monthly data (1986, p. 159). A shorter time frame such as this would better highlight seasonal and other fluctuations. Haywood’s major concern for the life-cycle model was the lack of empirical data over the long-term.

How Life Cycle Data is Collected and Analyzed

Once life cycle theory has been selected to analyze an area, historical data must be gathered for the researcher to examine. As Haywood has already mentioned, sometimes
collecting comparable data over the long-term can be a challenge, but it becomes extremely important for use in the life cycle models. There are numerous places data can be collected, including but not limited to: visitor bureaus, government agencies, city planning commissions, historical references and even personal opinions taken in the form of surveys. As long as the data can be suitably comparable and relevant to a specific time frame, then it can be used in trying to determine stages in the life cycle.

Once appropriate and comparable data has been collected, there are several different ways that it can be analyzed including regression analysis, questionnaire compilation and analysis, and time series analysis. Due to the nature of the life cycle theory, the data was almost always presented in relation to time. As a result, a time series analysis became the most common way to analyze data and it was used in many case studies including: Di Benedetto and Bojanic (1993), Choi (1997), Hing (1996), Cooper and Jackson (1989), and Morrison and Priddle (1981). Since the Nevada Gaming Abstracts (1968-1998) provide reliable and comparable data over an extended time frame, a time series analysis appears to be the most practical method of analysis for this paper. By examining the methodologies of the above mentioned time series case studies, insights can be gained on how to best apply time series analysis to this research effort.

In “Tourism Area Life Cycle Extensions”, Di Benedetto and Bojanic (1993) investigate the problem of being able to accurately forecast tourism for related industry and governmental concerns. They hypothesize that strategic and environmental factors can have a revitalization effect on the tourist area life cycle. Their study was conducted on the tourist area life cycle for Cypress Gardens and uses Butler’s (1980) six-stage life cycle model. The data set used for the study was a time series of the number of tourists
that visited Cypress Gardens in Florida over a 35-year period from 1949 to 1984. Specifically, it proposed that the Cypress Gardens property represents the six major stages of the tourist area life cycle theory. Di Benedetto and Bojanic hypothesize that Cypress Gardens has been able to revitalize itself during the “stagnation” stage before entering into the “decline” stage. They use a simple regression of a step-logarithmic function of the attendance against time to help prove their point. A second hypothesis suggests that strategic marketing efforts can cause fluctuations in monthly and quarterly attendance over and above the trend shown in the step logarithmic model. A more complex regression model was developed to take into account marketing efforts like new rides and attractions. “Dummy” variables were introduced to represent seasonal and external influences. The study concluded that the step-logarithmic model was very useful in providing accurate predictions over the period in question, and that the tourism area life cycle model was useful in forecasting. The authors conclude by noting some limitations of the study but they remain adamant about the validity of the step-logarithmic model. The first limitation was that the more complex regression model only used one new attraction to base the results and this limits the overall generalizability of the model. Second, the data set was somewhat old due to management at Cypress Garden that refused to release statistics past 1984. Therefore, the data used, while valid, has somewhat limited applications to the current market.

The di Benedetto and Bojanic study was an example of how time-series analysis can be used in conjunction with the six-stage life cycle model to analyze a tourist area. However, the regression model used focuses on determining the impact of one variable on one tourist attraction (Cypress Gardens) and would therefore be difficult to apply to an
entire market comprised of several attractions, as would be the case in Clark County. There are simply too many properties involved in the Clark County study to make trying to isolate one variable that has affected them all a feasible methodology. Therefore, regression will not be attempted in the research effort on Clark County, as a simple time series analysis would be more appropriate for a larger market.

In “Gambling in Hong Kong”, Choi (1997) tests the life cycle of the gambling business in Hong Kong. An additional purpose of this study was to review the history of gambling in Hong Kong and to see if the people gamble wisely. Choi reviews the history of gambling in Hong Kong specifically focusing on horse racing and the lottery. He uses a time series model (1973 to 1993) to measure gambling turnover and duty paid to the government. Choi uses the same data to measure the gambling activity in Hong Kong against a simple three stage (introduction, maturity, and decline) life cycle model. In addition, Choi uses a regression model to try and highlight people’s spending habits relative to price increases. He was able to isolate turnover and duty paid figures produced by the Hong Kong Commissioner of Inland Revenue, and therefore his regression works even though it was applied to an entire market. He concludes that both racing and the lottery are in the maturity stage, but that the rate of deceleration in spending was more obvious in the lottery. He says that the people in Hong Kong know how to gamble and that they realize the odds are not as good in the lottery. As a result, Choi concludes that horseracing has a longer life cycle than the lottery.

While the benefits of a time-series analysis are still obvious in the Choi study, the use of only a three-stage life cycle model seems too simple to adequately describe the data.
Nonetheless, this time series model provides a nice framework for the Clark County study as it examines long-term trends in a gaming environment.

Goncalves and Aguas discuss how product life cycle applies to the tourist industry in their article “The concept of life cycle: an application to the tourist product” (1997). The authors differentiate between a “tourist” and the “tourist product” in order to focus the application on the destination of the tourist as the “product”. Goncalves and Aguas go into great detail to explain the concept of the life cycle and they cite numerous studies that support different numbers of stages for different theories about life cycle. This article attempts to draw a parallel between the four-stage model and the six-stage model in order to examine the evolutionary and strategic implications the life cycle can have on a tourist product. The authors do a very thorough job of detailing each of the six stages in the life cycle model and this breakdown will be particularly useful in helping to define stages in Clark County.

After detailing each of the stages the authors examine the strategic meaning of each stage. Goncalves and Aguas use a case study of the Algarve (a province in Portugal) to test the conceptual framework of the life cycle. The study provides a time series analysis of the number of overnights in hotel establishments from a period of 1963 to 1993 and compares this data set to the annual growth rates. This was similar to the proposed examination of Clark County’s hotel occupancy percentages relative to the tourist growth rate. The authors conclude that the six-stage model was suitable for the study of tourist destinations, and that the Algarve has all the symptoms of the consolidation stage. Furthermore, they feel that there are signs of stagnation starting to appear and that the region needs to begin to prepare for the long-lasting stage of stabilization. Although
there were no formal hypotheses stated in this study, this article did a very good job of explaining the life cycle concept and providing a valuable case study to back up the theory.

In “Club Gaming in New South Wales, Australia: The Transition to Industry Maturity.” Hing (1996) examines the evolution of slot machine gaming in New South Wales relative to the life cycle. This paper takes a slightly different spin than the other articles reviewed, as Hing uses Porter’s framework of competitive forces (1980) to analyze the industry in terms of entry barriers, industry rivals, customer markets, and substitute products. The goal of the paper is to identify key developments in the industry and to use life cycle theory to try and predict future challenges in the industry. Hing gives a historical account of the gaming industry in New South Wales in order to set up the study of historical data. By highlighting key developments in the industry from the first lottery in 1897 to video poker games in 1995 the author is able to determine the level of development and current status of the industry. The paper then breaks down each of the competitive forces in the Porter model (entry barriers, industry rivals, customer markets, and substitute products) and gives specific details relating to the New South Wales industry. One of the most effective tools Hing uses to show the impact of substitute products on the slot machine market share was a time series graph that depicts the percentage of total gaming revenue spent on slot machines from 1972 to 1994. This graph clearly illustrates a marked dip in the middle 1980’s when lotteries were introduced. The study indicates that cooperation of the Registered Clubs Association has made for a competitive strength in the industry and was one of the ways that the industry can survive the maturity stage. Hing concludes that management of these clubs needs to
refocus their marketing appeal to the community and that the growth in new gaming products does not endanger the profitability of the slot machines.

While this was not the most statistically sophisticated research reviewed, this study was very valuable in terms of examining competitive sources that can impact on the tourist product. In addition, the Hing study provides a nice model to follow in studying Clark County, as it relates the importance of historical data in helping to determine the possible stages in the competitive forces model.

Another very useful tourist area study, "Destination Life Cycle," by Cooper and Jackson (1989), examines the Isle of Man off the coast of England. Due to the isolation of this island and the relative ease of tracking arrivals from the sea and air, this island has visitor statistics that date back to 1884. As a result, the Isle of Man makes for an attractive destination to examine using life cycle theory. Cooper and Jackson’s time series graph of the passenger arrivals from 1850 to 1990 follows the classic “S” shape curve and was graphed in relation to the population of the island. From the statistics they conclude that the Isle of Man has experienced the six stages of the tourist area life cycle model and that it currently sits in the “decline” stage. To help back up these conclusions, the authors do a breakdown of historical events relevant to each stage and they site the competitively priced Mediterranean destinations as one of the major reason for the decline (p. 391).

The life cycle model and the time series presentation of historical data by Cooper and Jackson will be helpful in setting up a time series model for the Clark County study. In addition, the detailed historical breakdown of events relative to the defined stages highlights interesting events such as World War II, public investment in the local
infrastructure, and competitive markets, which help to detail exactly how important historical events are and how they can impact a tourist area.

The importance of historical data can also be seen in “A Tourist Cycle in Lancaster County, Pennsylvania,” by Morrison and Priddle (1981). In this case study the authors use tourist brochures, travel literature, newspaper articles, interviews and field observations to examine the tourist area. They also site historical developments as far back as 1945. They compare developments in Lancaster County to Butler’s six-stage model and they use a time series model of visitation figures from 1954 to 1975 to indicate that the area may have skipped the consolidation stage and gone straight into the stagnation stage. However, their conclusions about this Amish tourist attraction are indecisive, for they “withhold judgement” (p. 284) as to whether or not the tourist area was truly in stagnation. Nonetheless, Morrison and Priddle conclude “Lancaster County’s highly accessible location in Megalopolis and the diversity of its tourist base” (p. 284) will keep it from entering into a significant long-term decline.

The Lancaster County case study was similar to the Cooper and Jackson study in that it helps to highlight the importance of historical data in breaking down a tourist area into the life cycle stages. While this study was not definitive in its conclusions, this serves to highlight the fact that the application of life cycle theory does not always lead to exact findings.

In last case reviewed, “Strategic Planning for Hotel-Casino Projects,” Baker (1999) examined the classical theories of strategic decision making for new or expanding hotel-casino properties in an effort to determine if these theories work for the industry, or if special measures would be necessary in the planning process. One of the theories he
examined was the product/service life cycle model. Baker developed this model by comparing the growth rate of the national legalized gaming industry to the Gross Domestic Product (GDP). To determine the total United States gross gaming revenue (USGGR), Baker combined the actual revenues of the 14 states with legalized gambling from 1975 to 1997. He then used the United States Department of Commerce (1998) index of GDP growth to convert actual USGGR to 1992 dollars. Baker then used this same technique to examine each of the nine jurisdictions within the United States. One of these jurisdictions was Southern Nevada which includes Clark County. Baker’s results indicate that Southern Nevada Gross Gaming Revenue (SONVGGR) declined from 1975 to 1984, increased from 1985 to 1991, dropped in 1992 and 1993, peaked in 1994, and then declined through 1998 (p. 106). Baker’s results will be compared to the results of this study to see how gaming revenues compare with the total casino revenues that will be examined in this paper.

Implications for the Clark County Study

This review of literature has defined life cycle theory and how it can be applied to a tourist destination or area. While this review did not uncover many specific gaming area case studies, the literature was able to point out the fundamental concepts and ideas that can be applied to virtually any product or area. The advantages and limitations of the theory were reviewed in order to help ascertain what can be expected of a life cycle study. Haywood (1986) pointed out the importance and potential influence of external forces and events on a destination and this needs to be considered in the Clark County study.
After examining several different life cycle models, Butler's (1980) six-stage model seems to be the most descriptive and therefore most appropriate for this model. Wilson (1969) and Getz (1992) provide examples of what indicators can be expected for each stage and these will be extremely helpful in analyzing both the Strip area and Downtown area in the Clark County study.

Haywood (1986) provides a six-step decision making process to help in making a tourist area life cycle model operational, and this will be beneficial in making sure that nothing was overlooked in the evaluation of the Clark County area. He details each decision and points out things like defining the area to be considered and he points out some alternate graph patterns for potential life cycle results. In addition, he offers a mathematical alternative to calculating the stage in the life cycle and it will be interesting to see how this compares to the results obtained using Wilson (1969) and Getz (1992) stage defining indicators. Both methods will serve as a basis for interpretation of the data presented in Chapter 4.

After a review of the methods used in several case studies to evaluate data, a simple time series presentation seems to be the most appropriate due to the scope of this research effort. A time series evaluation of the data used in conjunction with the stage indicators mentioned above as well as a thorough historical review should help to define the current life cycle stages of the two geographic areas under study in Clark County. Once this has been accomplished, an attempt will be made to forecast implications for the future of the Clark County area which will be presented in Chapter Five. The next section, Chapter Three, will focus on the methodology used for the collection and analysis of data for Clark County.
CHAPTER 3

THE DATA: TREATMENT AND INTERPRETATION

Research Objective

The purpose of this exploratory study was to gain insight into the growth of gaming in Clark County Nevada using life cycle theory to judge the current stage of gaming and to make forecasts for possible future developments. Life cycle theory requires data to be collected over a period of several years in order to make Butler’s six-stage life cycle model operational. The intention of this study was to analyze two different geographic areas of Clark County (The Las Vegas Strip and Downtown Las Vegas) individually and then to use these results to draw conclusions about the state of gaming in Clark County as a whole.

Sources of Data

Due to the nature and scope of this study, the use of secondary data was determined to be the best way to obtain comparable data for this life cycle study of Clark County. As mentioned previously by Haywood, finding comparable data can be a difficult challenge for a life cycle study to overcome. One of the best sources of comparable gaming statistics and information for Clark County has been The Nevada Gaming Abstracts (1968-1998). This annual report, put out by the Nevada State Gaming Control Board,
contains combined financial information from non-restricted Nevada gaming licensees. The Nevada Gaming Abstracts (1968-1998) include information for the entire State of Nevada. The information was broken down by County, and in some cases, by geographic areas within the County. The Gaming Abstracts were first produced in 1967, and they have since been published every year to date. Prior to 1975, the licensees were classified into two different groups. Group I included licensees with an annual gross revenue of $1,000,000 or more, and Group II included licensees with an annual gross revenue of less than $1,000,000. From 1975 on, various revenue ranges have been developed and the Gaming Control Board shifted away from the Group I and Group II concept and focused solely on Group I casinos. The data contained in the Abstracts was reported to the State of Nevada by the individual casinos for tax purposes and was therefore thought to be reliable. In fact, according to the 1972 Nevada Gaming Abstract, beginning January 1, 1968 and later, all Group I Licensees were required by new gaming regulations to have a certified audit of their Standard Financial Statements (p. 7). This requirement adds to the reliability of the data, and therefore this researcher will attempt to use information from the Abstracts beginning in 1968 and up to the most currently available Abstract put out in 1998.

Another good source of comparable data has been the Las Vegas Convention and Visitors Authority. This city-run organization compiles visitor statistics on Clark County and they were able to provide records that date back to 1970. Since this was roughly the same time-frame as the information provided in the Nevada Gaming Abstracts (1968-1998) the information reported by the Visitor's Authority will benefit this study by providing information about Las Vegas overall during the time-frame. The Visitor's
Authority provides information such as visitor volume, airline and California auto traffic statistics, and hotel and motel average occupancy percentages that are unavailable in the Abstracts, yet important to the evaluation of a tourist area. The Visitor's Authority gathers the traffic information from McCarran International Airport and the California Department of Agriculture in Yermo. This information, coupled with gaming revenue statistics, should provide an accurate indication of the life cycle stage of the gaming industry in Clark County.

The Las Vegas Convention and Visitors Authority also provides relevant historical information concerning factors that have impacted visitor statistics and therefore gaming revenues. This information can be found in the Las Vegas Marketing Bulletin, put out by the Visitors Authority every quarter. Specifically, the fourth quarter bulletin of every year provides a year-end summary of visitor statistics and what they attribute to be the causes of either an increase or decrease in the visitor volume. This information can be found in the "Visitor Statistics" section of each bulletin. Beginning in 1994 there was also a "Year in Review" breakdown, found on the "Executive Summary" section, of all major historical events that have effected the city. This type of information will help to explain peaks and valleys in the time-series analysis presented in Chapter 4.

One last source of data has been the United States Department of Labor, Bureau of Labor Statistics which provides the Consumer Price Index for All Urban Consumers (CPI-U). The CPI-U measures the average change over time in the prices paid by urban consumers for a fixed market basket of consumer goods. This allows consumers to compare what a product costs today with what the same product cost last year or ten years ago. This can be used as a means of adjusting dollar values when looking at
financial figures over a period of time. For the purpose of this study, the CPI will be used to analyze the average revenues of the casinos in adjusted dollar equivalents over the time frame of the study. How the adjusted dollar values will be calculated will be detailed in the Data Analysis section of this chapter.

Population and Sample Size

The original intention of this research effort was to analyze three different areas of Clark County in order to make conclusions about Clark County in general. The three different areas were The Las Vegas Strip, Downtown Las Vegas, and The Boulder Strip. The idea was to analyze these three different market areas as they typically cater to three different types of clientele. The more upscale Las Vegas Strip boasts “Mega Resorts” that offer elaborate entertainment, shopping, and fine dining. The Downtown Las Vegas area for the most part caters to a less upscale crowd and offers smaller casinos that are close together. These casinos typically offer lower table limits than found on the Strip, and the shows and dining offered are not as elaborate as that found at the large Strip properties. The Boulder Strip area, located East of the Strip, caters to a “locals” clientele. A “locals” casino typically has fewer rooms and caters to locals with a larger amount of video poker games and lower hold percentages to attract the local repeat business. Again, the original intention was to analyze all three areas over the time-frame in question, however, upon examination of the categories provided in The Nevada Gaming Abstracts (1968-1998), it was discovered that The Boulder Strip area was not reported on as an separate category until 1990. As a result, there was not enough comparable data to analyze The Boulder Strip area using life cycle theory. Therefore the Boulder Strip area
was eliminated as an area of study, and this research effort will attempt to draw conclusions about Clark County from the results found in studying The Las Vegas Strip and Downtown Las Vegas.

The actual sample size in each category will create somewhat of a challenge as the sample size and category classifications change significantly over the specified timeframe as more casinos enter the market. More recent classifications have broken down areas such as the Las Vegas Strip, into more specific revenue generation categories as seen in Table 2. As a result, some of the new categories may have to be combined with older categories in order to come up with comparable data. Tables 2 and 3 help to clarify the category changes for the last thirty years. Table 2 describes the Las Vegas Strip from 1967 to 1998 and Table 3 describes Downtown Las Vegas for the same period reported in The Nevada Gaming Abstracts (1968-1998). In Table 2 it was evident that the reporting categories have grown larger for the Las Vegas Strip area over the period under study. This can be attributed to the growth in both the number of casinos operating, which will be detailed in Chapter 4, and the amount that the casinos are making in revenue. As the casino resorts have largely increased in size, it stands to reason that a larger operation will make more money. As a result, the Gaming Control Board felt it necessary to increase the categories reporting this data to better reflect these changes in casino revenue generation.

The revenue reporting categories for The Downtown Las Vegas area have also seen increases due to growth in that area, however they are not as dramatic as the increases found for the Las Vegas Strip. Table 3 shows how revenue has been reported for Downtown Las Vegas from 1967 to 1998. The difference between Table 3 and Table 2
was that the changes Downtown were much less frequent and relatively small compared to the changes that were applied to The Las Vegas Strip. This was due to the limited growth that the Downtown area has seen over the period in question. For the

Table 2

Revenue Generation Categories Reported By the Nevada State Gaming Control Board

<table>
<thead>
<tr>
<th>Period</th>
<th>Revenue Reporting Categories</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967-1974</td>
<td>Group I Casinos (Revenue over $1 Million)</td>
</tr>
<tr>
<td></td>
<td>Group II Casinos (Revenue less than $1 Million)</td>
</tr>
<tr>
<td>1975-1982</td>
<td>$1 Million to $10 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$10 Million to $20 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$20 Million and Over in Revenue</td>
</tr>
<tr>
<td>1983-1989</td>
<td>$1 Million to $10 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$10 Million to $20 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$20 Million to $60 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$60 Million and Over in Revenue</td>
</tr>
<tr>
<td>1990-1995</td>
<td>$1 Million to $12 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$12 Million to $36 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$36 Million to $72 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$72 Million and Over in Revenue</td>
</tr>
<tr>
<td>1996</td>
<td>$1 Million to $12 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$12 Million to $72 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$72 Million and Over in Revenue</td>
</tr>
<tr>
<td>1997-1998</td>
<td>$1 Million to $72 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$72 Million and Over in Revenue</td>
</tr>
</tbody>
</table>

Downtown area, the number of casinos in operation as well as the size of the casinos has remained relatively constant, so the necessity to increase the reporting categories was minimized.

Table 3

Revenue Generation Categories Reported By the Nevada State Gaming Control Board

<table>
<thead>
<tr>
<th>Period</th>
<th>Revenue Reporting Categories</th>
</tr>
</thead>
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<tr>
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<td>Group II Casinos (Revenue less than $1 Million)</td>
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<td>1975-1989</td>
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</tr>
<tr>
<td></td>
<td>$10 Million and Over in Revenue</td>
</tr>
<tr>
<td>1990-1998</td>
<td>$1 Million to $12 Million in Revenue</td>
</tr>
<tr>
<td></td>
<td>$12 Million and Over in Revenue</td>
</tr>
</tbody>
</table>


According to Russell Guindon, Senior Research Specialist of the Nevada Gaming Control Board, another reason that the categories have been changed was to protect the confidentiality of the individual casinos financial information. (Russell Guindon, Personal Communication, September 9, 1999) All casinos are required to provide financial information to the State of Nevada for tax purposes. Some of these casinos are privately owned and they want their financial records kept confidential, so as a means of maintaining confidentiality, the reporting categories have also been changed to prevent
"backtracking data" to determine private financial records. For instance, if there were three casinos in a reporting category and two of them were owned by the same company, then logic would dictate that by subtracting their financial information from the totals provided by in the Gaming Abstracts the details of the third casino would become readily apparent. This backtracking concept can be applied on a larger scale to publicly traded companies whose records are publicly available. In an effort to protect the financial records of casinos that want confidentiality, the Gaming Control Board makes every effort to protect both the identities of the casinos and their financial records. A request was made to Mr. Guindon to provide information that would allow the reporting categories to be adjusted for this research effort, and the request was denied based on the above mentioned confidentiality concerns.

Data Collection

As the data being examined in this study was secondary in nature, the collection of the financial information and statistics was primarily done in the University of Nevada Las Vegas library. The Government Collections section of the library has copies of the Nevada Gaming Abstracts (1968-1998) that were needed for the timeframe in question. The majority of the Abstracts do not circulate, and therefore copies were made of the necessary information for continuous reference.

Visitor information and hotel occupancy percentages were obtained from the Las Vegas Convention and Visitors Authority (Visitors Authority). These figures will be used as another indicator of the growth of gaming in Clark County. The Visitors Authority was extremely helpful in providing information for the period in question. As
mentioned previously, the Visitors Authority also puts out a quarterly marketing bulletin that contains a more detailed breakdown on a quarterly basis. The Special Collections section of the library has these bulletins dating back to 1970, and again copies were made of the necessary information for reference. The bulletin for the fourth quarter of each year also contains significant historical information that has impacted the visitor statistics. This information will be used as another indicator of the growth and popularity of gaming in Clark County.

The Consumer Price Index ratios were found online at the United States Department of Labor, Bureau of Labor and Statistics’ Web page. This Web address contained information dating back to 1913 and broke down each year on a month to month basis (Available on-line: ftp://ftp.bls.gov/pub/special.requests/cpi/cpiai.txt). The statistics needed as well as information about what the CPI is and how it was used were printed out for easy reference.

Data Analysis

Once the data was obtained, the desired statistics were entered into Excel spreadsheets for analysis. The primary analysis was a fairly simple time-series graph of Average Revenue Per Casino Per Year for the past thirty years for both The Las Vegas Strip and Downtown Las Vegas. The average total revenue per casino was calculated by dividing total revenues in each category by the number of casinos in each category for each year. These figures were then plotted on a graph and analyzed for each category. Hotel occupancy percentages were also graphed over the time frame specified. A time-series
analysis of these results was then compared to both the average total revenue per casino and historical data to determine the relevance of these results to life cycle theory.

Due to the reporting categories in the Gaming Abstracts, consideration was given as to how to combine the categories to make the data comparable over the period under study. In the case of the Las Vegas Strip, referring back to Table 2 shows that the largest reporting categories increased from reporting all revenues over $1 Million in 1974 to reporting revenues over $72 Million dollars in 1998. In an effort to maintain the original reporting category of over $1 Million dollars in revenue, the subsequent categories were combined for the later years in order to analyze all years in the study with the same reporting category. While this method was statistically valid, an examination of the results demonstrates that this does not accurately portray the way revenue was being generated in the Clark County market. Table 4 helps to demonstrate the difference between examining the category of $1 Million and Over in Revenue versus examining only the largest category of revenue generation for each year. This table compares the revenue of the $1 million and over category with revenues generated by the largest reporting categories (changed over the years by the Gaming Control Board). The theory here was that it may be more relevant to this study to examine only the largest category reported in the Abstracts as these figures may be more indicative of the gaming market. Table 4 shows that while on average only 39% of the total number of casinos that make over $1 million are represented by the largest reporting category in the Abstracts, these large revenue generators account for an average of 79% of the total revenue generated on the Las Vegas Strip. These averages are gathered from 1975 to 1998 as prior to 1975 the only category was Group I casinos ($1 Million and over in Revenue). The large revenue
**Table 4**

**Contribution to Total Strip Casino Revenue by Reporting Category**

<table>
<thead>
<tr>
<th>Year</th>
<th># of Casinos</th>
<th>Total Revenue</th>
<th>*Category</th>
<th># of Casinos</th>
<th>Total Revenue</th>
<th>% Group I Casinos</th>
<th>% Revenue Earned</th>
</tr>
</thead>
<tbody>
<tr>
<td>1967</td>
<td>7</td>
<td>$137,940,000</td>
<td>1M+**</td>
<td>7</td>
<td>$137,940,000</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1968</td>
<td>15</td>
<td>$261,732,000</td>
<td>1M+</td>
<td>15</td>
<td>$261,732,000</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1969</td>
<td>15</td>
<td>$365,000,000</td>
<td>1M+</td>
<td>15</td>
<td>$365,600,000</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1970</td>
<td>18</td>
<td>$458,568,000</td>
<td>1M+</td>
<td>18</td>
<td>$458,568,000</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1971</td>
<td>18</td>
<td>$497,529,000</td>
<td>1M+</td>
<td>18</td>
<td>$497,529,000</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1972</td>
<td>18</td>
<td>$516,225,000</td>
<td>1M+</td>
<td>18</td>
<td>$516,225,000</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1973</td>
<td>20</td>
<td>$594,441,000</td>
<td>1M+</td>
<td>20</td>
<td>$594,441,000</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1974</td>
<td>23</td>
<td>$661,628,000</td>
<td>1M+</td>
<td>23</td>
<td>$661,628,000</td>
<td>100%</td>
<td>100%</td>
</tr>
<tr>
<td>1975</td>
<td>11</td>
<td>$806,152,000</td>
<td>20M+</td>
<td>28</td>
<td>$992,711,000</td>
<td>39%</td>
<td>81%</td>
</tr>
<tr>
<td>1976</td>
<td>11</td>
<td>$846,504,000</td>
<td>20M+</td>
<td>31</td>
<td>$1,083,600,000</td>
<td>35%</td>
<td>78%</td>
</tr>
<tr>
<td>1977</td>
<td>12</td>
<td>$989,533,000</td>
<td>20M+</td>
<td>30</td>
<td>$1,171,378,000</td>
<td>40%</td>
<td>84%</td>
</tr>
<tr>
<td>1978</td>
<td>14</td>
<td>$1,225,743,000</td>
<td>20M+</td>
<td>33</td>
<td>$1,423,995,000</td>
<td>42%</td>
<td>86%</td>
</tr>
<tr>
<td>1979</td>
<td>16</td>
<td>$1,487,520,000</td>
<td>20M+</td>
<td>34</td>
<td>$1,689,499,000</td>
<td>47%</td>
<td>88%</td>
</tr>
<tr>
<td>1980</td>
<td>15</td>
<td>$1,600,121,000</td>
<td>20M+</td>
<td>36</td>
<td>$1,868,412,000</td>
<td>42%</td>
<td>86%</td>
</tr>
<tr>
<td>1981</td>
<td>16</td>
<td>$1,614,644,000</td>
<td>20M+</td>
<td>35</td>
<td>$1,850,087,000</td>
<td>46%</td>
<td>87%</td>
</tr>
<tr>
<td>1982</td>
<td>18</td>
<td>$1,931,913,000</td>
<td>20M+</td>
<td>36</td>
<td>$2,166,332,000</td>
<td>50%</td>
<td>89%</td>
</tr>
<tr>
<td>1983</td>
<td>7</td>
<td>$1,096,405,000</td>
<td>60M+</td>
<td>35</td>
<td>$1,940,709,000</td>
<td>20%</td>
<td>56%</td>
</tr>
<tr>
<td>1984</td>
<td>6</td>
<td>$1,046,583,555</td>
<td>60M+</td>
<td>38</td>
<td>$2,162,793,583</td>
<td>16%</td>
<td>48%</td>
</tr>
<tr>
<td>1985</td>
<td>8</td>
<td>$1,330,779,286</td>
<td>60M+</td>
<td>38</td>
<td>$2,279,180,202</td>
<td>21%</td>
<td>58%</td>
</tr>
<tr>
<td>1986</td>
<td>9</td>
<td>$1,519,575,244</td>
<td>60M+</td>
<td>35</td>
<td>$2,380,820,794</td>
<td>26%</td>
<td>64%</td>
</tr>
<tr>
<td>1987</td>
<td>11</td>
<td>$1,982,430,991</td>
<td>60M+</td>
<td>38</td>
<td>$2,805,402,599</td>
<td>29%</td>
<td>71%</td>
</tr>
<tr>
<td>1988</td>
<td>12</td>
<td>$2,207,896,124</td>
<td>60M+</td>
<td>40</td>
<td>$3,034,761,582</td>
<td>30%</td>
<td>73%</td>
</tr>
<tr>
<td>1989</td>
<td>15</td>
<td>$2,761,738,104</td>
<td>60M+</td>
<td>39</td>
<td>$3,431,619,148</td>
<td>38%</td>
<td>80%</td>
</tr>
<tr>
<td>1990</td>
<td>13</td>
<td>$2,950,736,942</td>
<td>72M+</td>
<td>41</td>
<td>$3,939,331,858</td>
<td>32%</td>
<td>75%</td>
</tr>
<tr>
<td>1991</td>
<td>14</td>
<td>$3,588,601,216</td>
<td>72M+</td>
<td>39</td>
<td>$4,531,867,842</td>
<td>36%</td>
<td>79%</td>
</tr>
<tr>
<td>1992</td>
<td>14</td>
<td>$3,513,319,303</td>
<td>72M+</td>
<td>37</td>
<td>$4,463,692,494</td>
<td>38%</td>
<td>79%</td>
</tr>
<tr>
<td>1993</td>
<td>15</td>
<td>$3,915,049,133</td>
<td>72M+</td>
<td>32</td>
<td>$4,707,202,656</td>
<td>47%</td>
<td>83%</td>
</tr>
<tr>
<td>1994</td>
<td>19</td>
<td>$5,026,829,815</td>
<td>72M+</td>
<td>39</td>
<td>$5,777,872,257</td>
<td>49%</td>
<td>87%</td>
</tr>
<tr>
<td>1995</td>
<td>19</td>
<td>$5,753,704,589</td>
<td>72M+</td>
<td>40</td>
<td>$6,537,678,305</td>
<td>48%</td>
<td>88%</td>
</tr>
<tr>
<td>1996</td>
<td>19</td>
<td>$6,070,028,992</td>
<td>72M+</td>
<td>40</td>
<td>$6,866,354,281</td>
<td>48%</td>
<td>88%</td>
</tr>
<tr>
<td>1997</td>
<td>21</td>
<td>$6,425,389,511</td>
<td>72M+</td>
<td>36</td>
<td>$7,087,266,194</td>
<td>58%</td>
<td>91%</td>
</tr>
<tr>
<td>1998</td>
<td>20</td>
<td>$6,676,416,672</td>
<td>72M+</td>
<td>38</td>
<td>$7,397,825,633</td>
<td>53%</td>
<td>90%</td>
</tr>
</tbody>
</table>

Average From 1975-1998 39% 79%

*Categories provided by *Nevada Gaming Abstracts* 1967-1998

**M+ = Million Dollars and Over**

Source: *Nevada Gaming Abstracts 1975-1998*
generating categories that have been developed by the Gaming Control Board represent well over the majority of the revenue being generated, and therefore they are the most representative of the Las Vegas Strip. As a result, including data prior to 1975 would not properly compare to the adjusted revenue categories and will skew the data. Therefore data prior to 1975 will not be included (as was originally intended) in the time series analysis of average total revenues. While this reduces the number of years included in the life cycle study, having properly comparable and relevant data makes this a necessity.

Examining the changes in the reporting categories for the Downtown Las Vegas Area also needs to be done in order to determine if the largest reporting category for this area was the most appropriate for study. As was the case with the Strip, information prior to 1975 will be excluded as it covers only Group I casinos. After 1975 there was only one category change in 1990 when the category was changed from Over $10 Million in revenue to Over $12 Million in Revenue. This relatively minor adjustment does not have a major impact on the data, but nonetheless, the period from 1975 to 1998 reflects similar results as that of the Strip. For that period, the largest revenue generation category Downtown accounts for an average of 58% of the number of casinos downtown and for an average of 92% of the total revenue generated in that area. Again, well over the majority of the revenue can be attributed to these large revenue generation categories and therefore they will be used for the time series analysis of this area.

After the data has been graphed and analyzed, historical data will be examined to hopefully help highlight some of the various stages in the life cycle. As mentioned previously, information found in the Marketing Bulletins put out by the Visitors Authority will be used to obtain this information. There are various kinds of information
that will benefit this study, including but not limited to: the introduction of new casinos
into the category, the closing of a casino in the category, the introduction or change in
any gaming law or tax, the introduction of gaming into other markets thought to compete
with any category in question, and the general state of the economy. This information
can be critical in determining life cycle stage and can be crucial in determining the
relevance of peaks and valleys in the time-series data.

Historical information will also be helpful in determining the first two stages of
Butler's six-stage life cycle model. These two stages, exploration and involvement, will
likely have occurred prior to the time-series analysis covered in this study. Historical
information will help to show these two stages in relation to this Clark County Study.

Visitor statistics provided by the Las Vegas Convention and Visitors Authority will be
examined for the timeframe under investigation to determine if the number of visitors
coincides with the casino growth. When examined in conjunction with average revenues
per casino, these results can be broken down into the average revenue generated per
visitor. While it may be impossible for the visitor statistics to be broken down into the
exact casino categories under study, the overall figures can be compared to the overall
statistics generated from the Nevada Gaming Abstracts (1968-1998). The amount of
revenue generated per visitor can help to determine the revenue potential for the gaming
market. In addition, the spending habits of the visitors (a conservative vs. liberal
spending climate) could influence the data in the various time-series analysis. This can
be influenced by historical economic conditions such as a recession.

To see the effects of inflation on the revenues generated by the casinos over the period
under study, the Consumer Price Index for All Urban Consumers will be used to adjust
dollar values. According to the Bureau of Labor Statistics this index represents 80% of the total United States population and remains an accurate measure of inflation. The index presents a measure of the percent of change in what a set amount and type of goods costs from one period to another. A base period was established and all prices are compared to that period. For the purposes of this study the base period was from 1982 to 1984. The average casino revenues can then be adjusted using the index figures to come to a better understanding of how today’s revenues actually compare to revenues in the past.

Other methods that will be used to help determine the stages of the life cycle for both the Strip and Downtown include the indicators and techniques described in Chapter 2. Specifically, the Stage indicators outlined by Getz (1992) in Table 1 will help to analyze the data, and may bring into focus some of the figures that will be generated for the time-series analysis presented in Chapter 4. In addition, the model developed by Haywood (1986) will provide an interesting comparison to the results yielded using Getz’s stage indicators (Figure 4). Haywood’s model will be applied after results are found using the stage indicators so that a true comparison of the two different techniques can be made. Whether or not they yield the same results will be interesting and may or may not help to validate the life cycle stages and conclusions of this study presented in Chapter 5.
CHAPTER 4

DESCRIPTIVE ANALYSIS OF FINDINGS

The data obtained from the *Nevada Gaming Abstracts* (1968-1998) and the Las Vegas Convention and Visitor Authority were examined using time-series analysis and other various statistical techniques. Chapter Four outlines the individual results found for the Las Vegas Strip and Downtown Las Vegas and then goes on to detail the results found by examining the city of Las Vegas visitor statistics, contribution per visitor, and average occupancy percentages. Historical events that may have affected the data represented will be discussed for each set of data. Conclusions about this study and recommendations for future research will be made in Chapter Five.

The Las Vegas Strip

As mentioned in Chapter Three, the way revenue figures have been reported in the *Nevada Gaming Abstracts* (1968-1998) has changed over time and this therefore created some challenges in terms of determining comparable data. In Chapter Three the year 1967 was eliminated due to accuracy of reporting concerns. In addition, years 1968-1974 were eliminated due to the fact that during this time frame all of the data for casinos earning over $1 million in gaming revenue was reported in the same category “Group I
casinos". This information proved incomparable to data provided in the subsequent years when the Group I concept was broken up into several larger revenue reporting categories. Table 4 helps to demonstrate the contribution to total Group I revenue on the Las Vegas Strip by the large reporting categories and shows that well over the majority of revenue was generated by fewer than half of the Strip properties. This justifies using the largest reporting categories for analysis in this study as they are the most representational of the revenues generated on the Strip. However, a further analysis of the data contained in Table 4 shows that for the reporting category “60 Million and Over”, between the years 1983 and 1989, that the contribution to total revenue was relatively low compared to the prior period. This was demonstrated in Figure 5 where the percent contribution to total revenue was given on a year to year basis in relation to the average total revenue per casino line graph. When the largest reporting category was changed from “20 Million and Over” to “60 Million and Over” in 1983, an additional category of “20 Million to 60 Million” was included in the Gaming Abstracts which accounts for the reduction in revenue reported. If this category was added to the “60 Million and Over” category then the differences in the percentage contribution to total Group I revenue presented in Figure 5 were largely eliminated. Figure 6 shows the contribution to total Group I revenue when the “20 Million to 60 Million” and “60 Million and Over” categories are combined for the period between 1983 and 1989. Combining these categories raises the average percent contribution to total Group I revenue over that period from 64% to almost 90%. As a result, combining the categories gives a more consistent picture of the revenue reported during that timeframe and will therefore be used for the purposes of this study. Attempts were made to combine other categories in an effort to improve the accuracy of
Figure 5. Las Vegas Strip – Largest Reporting Categories – Average Total Revenue Per Casino
Figure 6. Las Vegas Strip – Largest Reporting Categories Combined – Average Total Revenue Per Casino
the data set, but due to the limitations mentioned in Chapter 3, this was the only combination of categories that benefited the comparability of data for this research effort. As a result, Figure 6 will be used for the time-series analysis of average total revenues per casino for the Las Vegas Strip.

Before Life Cycle theory was applied to the graph presented in Figure 6, the relatively large increase in average total revenue per casino from 1990-1998 needs to be commented on. One reason that the average total revenue per casino increased during this period was “Mega” resorts started to emerge that boasted larger casinos with almost twice as many hotel rooms. This change in the way casinos were traditionally built was started by the November 1989 opening of the Mirage and closely followed by the June 1990 opening of the Excalibur. As larger casinos make more money, part of the sharp increase in the average total revenue per casino in 1990 can be attributed to these two new resorts. In addition, when the reporting category changed from “Over 60 Million” to “Over 72 Million” in 1990, Figure 6 shows that the number of casinos contributing to the category reduced from 22 to 13. This reduction in the denominator of the average revenue formula would certainly increase the average revenue figure. However, those 13 casinos still accounted for 75% of the total Group I revenue generated on the Strip. While this contribution to total Group I revenue was smaller than the almost 90% shown for the period of 1983 to 1989, it was still very representational of the revenues being generated on the Strip. In fact, for the period of 1990 to 1998, the average percent contribution to total Group I revenue for the category “Over 72 Million” accounts for over 84%. Therefore, even though there was an initial jump in the graph between 1989
and 1990 when the reporting categories changed, this data set was found to be the most comparable for this study.

Having determined that the data set for the Las Vegas Strip is both comparable and representative, and therefore appropriate, PLC theory can now be applied to the time-series graph for this geographic area of Clark County. A trend line (two period moving average) helps to smooth out the graph line (Figure 7) and helps to show that the average total revenue per casino time-series line takes the shape of the classic “S” curve as seen in Chapter 2, Figure 1. Granted, the “S” shape was somewhat flatter than the example provided in Figure 1, but the basic shape was usable for a life cycle model. When Butler’s (1980) six-stage model was applied to the Las Vegas Strip average total revenue per casino line, an observable PLC stage is not readily apparent. A comparison of Figure 7 to Figure 2 shows that the PLC stage could be described as in Consolidation or Stagnation depending on how you view the graph and whether or not the trend line was used in the observation.

Another possible visual interpretation of the actual data line in Figure 7 would be that the area entered the decline stage in 1997 and was rejuvenated in 1998. While this only counts for a two year period and PLC stages are usually longer in duration, the historical fact that the Bellagio Hotel opened on October 15, 1998 could indicate a rejuvenation of the market. The Bellagio was the most expensive casino resort to ever open on the Strip, and was designed to attract a more upper class clientele. An argument could certainly be made that with its fine art gallery and gourmet restaurants, Bellagio has successfully revitalized the market and attracted a whole new and more refined type of visitor. In fact,
Figure 7. Las Vegas Strip – Large Reporting Categories – Average Total Revenue Per Casino Trend Line
the Visitor Authority attributes much of the 1998 increase in revenues to the Bellagio, even though it only opened in the fourth quarter of the year.

One last interpretation of the Strip average revenue graph would be to compare the trend line to the first example provided in Haywood's (1986) alternate life cycle graphs found in Figure 3. In this example, a steadily increasing line that does not appear to peak was described by Haywood as a well-managed tourist area that continues to attract a consistent number of visitors. This would indicate that the area was still in the growth stage as the graph still has an upward slope.

All of the above visual observations of the Strip average revenue graph can be further tested when the PLC stage indicators provided by Getz (1992) in Table 1 are examined in relation to this graph. Certainly the first three stages (Exploration, Involvement, and Development) of the Butler model are evident for the Las Vegas Strip area according to the stage indicators provided in Table 1. The stage indicators of the fourth stage of Consolidation can also be seen in the slowing average revenue growth, evident in the trend line. The other two indicators, extensive advertising and the appreciation of tourism by local residents, are evident for the Strip. The remaining two stages, stagnation and post-stagnation (rejuvenation or decline), do not seem to apply to the Strip. More specifically, the stagnation and decline indicators do not apply, but the rejuvenation indicator “completely new attractions replace original lures” (Getz, p. 763) could be argued to apply to an attraction like the Bellagio and other new properties that followed.

A historical account of outside influences that have affected visitor statistics, and therefore revenues, can be found in the Marketing Bulletin put out by the Las Vegas Convention and Visitors Authority. The first major competitor to Las Vegas as a
gambling destination was Atlantic City. New Jersey opening in 1978. The impact on the Las Vegas market can be seen in the early 1980’s as the average revenue per casino experiences little to no growth. However, absorbing the opening of Atlantic City was not the only factor that attributed to little growth during that period. In 1980 the Marketing Bulletin cites high gas prices, rising interest rates, recessionary trends, and the MGM hotel fire as contributing to the declining visitor statistics. In 1981 and 1982 the same recessionary and inflationary trends slowed growth, and in 1981 the air controllers strike decreased visitation. An overall strong economy helped growth from 1983 to 1989, and in 1990 the impact of the change in reporting category in the Gaming Abstracts has already been discussed. The 1990’s show tremendous casino growth on the Strip, both in the size and the number of properties. As previously mentioned, a new Era of “Mega” resorts was begun in late 1989 with the opening of the Mirage and followed by the 1990 opening of the Excalibur. This trend of “Mega” resorts continued in 1993 with the opening of Treasure Island, Luxor, and MGM Grand. These attractive themed casinos opening in 1993 helped to contribute to a record 19.9% increase in visitor volume in 1994. In 1996 the Monte Carlo opened, and the Sands and the Hacienda were imploded to make way for newer casinos. In 1997 New York New York opened and there were room expansions at The Rio, Harrah’s and Caesar’s. The Aladdin was imploded in 1998 and The Bellagio opened in the fourth quarter, both of which helped to increase the average revenue per casino in 1998. Also in 1998, the McCarran airport expansion was completed, making the airport capable of handling 45 million visitors annually. The number of casinos in the Category of earning over $72 Million Dollars in Gaming Revenue since 1990 has increased from 13 to 20 in 1998. This growth in the number of
casinos has accompanied an increase in the average total revenue per casino, with the exception of 1997 where the average total revenue per casino took a dip as the number of casinos in the reporting category increased from 19 to 21.

The last analysis done on the data set for the Las Vegas Strip was to calculate the Consumer Price Index adjusted revenue figures for each year's average revenue. This adjusted revenue line, shown in Figure 8, compares current average revenue figures with the base period of 1982-1984. In other words, this adjusted revenue line shows how much the money earned today was worth in 1980-dollar terms. The results of this calculation show that the average revenue per casino line was flattened, but that the peaks and valleys correlate to the regular average revenue line. The change in the reporting categories can again be seen in the large jump in average revenues in 1990. From a PLC standpoint the results of the CPI graph are somewhat unremarkable, as the relatively flat line does not necessarily indicate a particular life cycle stage.

Downtown Las Vegas

The average total revenue per casino statistics for Downtown Las Vegas are presented in the same format as the information shown for the Las Vegas Strip. The notable difference was that there are only two reporting categories for the time period under study. The change in 1990 only increased the reporting category by $2 Million and this did not have a major impact on the average revenue per casino statistics. Figure 9 shows that the change in reporting category reduced the number of casinos in the category from 13 to 11, but only reduced the contribution to total Group I revenue generated Downtown by 2%. The revenue reported from 1975 to 1998 by these two reporting categories
Figure 8. Las Vegas Strip Average Revenues and CPI Adjusted Revenues
Figure 9. Downtown Las Vegas – Largest Reporting Category – Average Total Revenue Per Casino
accounts for an average of almost 92% of the total Group I revenue generated during that time, and therefore, this data set was very representational of the revenues generated over the period.

Having determined that the data set for Downtown Las Vegas was appropriate for analysis, PLC theory can be applied to the time-series graph for this area of Clark County. A visual examination of the average total revenue per casino graph line and the two year moving average (trend) line in Figure 10 shows that from a PLC standpoint this area appears to be in stagnation or perhaps even decline. When compared to Butler’s (1980) six-stage model described in Figure 2, the Downtown average total revenue per casino line’s lack of growth for the most part of the 1990’s indicates a declining trend that would be similar to example “C” or “D” in the Figure 2 graphic. As Butler describes, example “C” indicates that after an initial adjustment downwards, a more stable level of visitation can be maintained. Example “D” depicts a more dramatic decrease usually associated with a failure to replace resources, overuse of existing resources, and a failure to remain competitive with other markets.

An examination of the PLC stage indicators provided by Getz (1992) in Table 1 can help to further test the visual observations made using the above mentioned Butler model. As was the case with the Las Vegas Strip, the first three stages (Exploration, Involvement, and Development) of the Butler model are all evident for the Downtown Las Vegas area according to the stage indicators provided in Table 1. The three indicators for the Consolidation stage also appear to be evident for Downtown, especially the slowing growth rates evidenced by the graph of average revenues. In addition, many of the eight indicators for the Stagnation stage also seem applicable to Downtown such
Figure 10. Downtown Las Vegas – Largest Reporting Category – Average Total Revenue Per Casino Trend Line
as: peak visitor numbers reached, capacity limits reached, area no longer fashionable, heavy reliance on repeat trade, and frequent ownership changes. The decline stage indicators mentioned in Table 1 do not appear evident for the Downtown area.

From a historical perspective, many of the same external influences that impacted the Las Vegas Strip average total revenues can also be seen to have impacted the Downtown Las Vegas average revenues as well. For instance, a dip in revenues can be seen in 1981 and 1982, as was the case for the Strip, largely due to a nationwide recession, high gas prices, and the impact of Atlantic City opening. The rest of the 1980's show growth in accordance with a strong economy. The change in reporting category in 1990 raised the average total revenues slightly, and they have remained relatively constant through 1998. Despite the Convention Authority reporting a record 19.9% increase in visitor volume in 1994, average total revenues for Downtown were unaffected, which indicates that perhaps this area has fallen out of favor in terms of popularity. In December 1995, a redevelopment project known as The Fremont Street Experience opened as a one-of-a-kind Sky Parade and Light Show spanning five blocks and creating a pedestrian only outdoor mall Downtown. Also in 1995, the hotel known as Vegas World closed for renovations, not to reopen (as the Stratosphere) until April 30, 1996. The closing of Vegas World seems to have impacted the average revenue per casino in 1996 where a dip was evident, despite the fact that the Fremont Street Experience was designed to attract visitors Downtown.

The last analysis done on the data set for Downtown Las Vegas was to calculate the CPI adjusted revenue figures for the period under study (Figure 11). The same base period of 1982-1984 was used to show how the revenues earned today compare with
Figure 11. Downtown Las Vegas Actual and CPI Adjusted Average Total Revenue Per Casino
revenues earned during the base years. The results found here are more dramatic than that found on the Strip. Here, instead of merely mirroring the average total revenue line, the CPI adjusted revenue line shows that the area was definitely declining in relation to the base period. This furthers the stagnation theory, as the flattening of the actual average total revenue line does not even keep up with inflation.

Visitor Statistics for the City of Las Vegas

Having examined both the Las Vegas Strip and Downtown Las Vegas, the visitor statistics for the City of Las Vegas as a whole can now be reviewed. These figures are provided by the Las Vegas Convention and Visitors Authority and can not be divided into geographic categories, as was the case with the casino revenues.

The visitor volume reported by the Visitors Authority shows a steady increase for the period under study. The previously mentioned record breaking 19.9% visitor increase in 1994 was evident on the graph of visitor volume seen in Figure 12. The addition of more rooms as well as the attraction of the “Mega” resorts in the 1990’s undoubtedly helped to continue the increase in visitor volume through 1998. However, visual inspection of the growth graph in Figure 12 shows that growth has slowed considerably in the last few years, giving the curve a very similar shape to that of the trend line for the Las Vegas Strip seen in Figure 7.

When trying to determine the PLC stage of a tourist area, Haywood (1986) suggests a method of testing visitor statistics that can indicate the current stage of an area. As detailed in Chapter 2, this test measures the percent change in visitor statistics from year to year and then measures it against the scale in Figure 4. Table 5 depicts the city of Las
Figure 12. Las Vegas Visitor Volume Reported by Convention and Visitors Authority
Table # 5

**Haywood Analysis of Las Vegas Visitor Statistics**

<table>
<thead>
<tr>
<th>Year</th>
<th>Visitor Volume</th>
<th>Percent Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>1970</td>
<td>6,787,650</td>
<td>8.00%</td>
</tr>
<tr>
<td>1971</td>
<td>7,361,783</td>
<td>8.00%</td>
</tr>
<tr>
<td>1972</td>
<td>7,954,748</td>
<td>6.00%</td>
</tr>
<tr>
<td>1973</td>
<td>8,474,727</td>
<td>0.02%</td>
</tr>
<tr>
<td>1974</td>
<td>8,664,751</td>
<td>5.00%</td>
</tr>
<tr>
<td>1975</td>
<td>9,151,427</td>
<td>6.00%</td>
</tr>
<tr>
<td>1976</td>
<td>9,769,354</td>
<td>10.00%</td>
</tr>
<tr>
<td>1977</td>
<td>10,137,021</td>
<td>3.00%</td>
</tr>
<tr>
<td>1978</td>
<td>11,178,111</td>
<td>4.00%</td>
</tr>
<tr>
<td>1979</td>
<td>11,696,073</td>
<td>2.00%</td>
</tr>
<tr>
<td>1980</td>
<td>11,941,524</td>
<td>-0.01%</td>
</tr>
<tr>
<td>1981</td>
<td>11,820,788</td>
<td>-0.03%</td>
</tr>
<tr>
<td>1982</td>
<td>11,633,728</td>
<td>6.00%</td>
</tr>
<tr>
<td>1983</td>
<td>12,348,270</td>
<td>4.00%</td>
</tr>
<tr>
<td>1984</td>
<td>12,843,433</td>
<td>10.00%</td>
</tr>
<tr>
<td>1985</td>
<td>14,194,189</td>
<td>7.00%</td>
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<td>1986</td>
<td>15,196,284</td>
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<td>1987</td>
<td>17,199,808</td>
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<td>1988</td>
<td>18,129,684</td>
<td>15.00%</td>
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<tr>
<td>1989</td>
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<td>1990</td>
<td>21,315,116</td>
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<td>1991</td>
<td>21,886,865</td>
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<td>1992</td>
<td>23,522,593</td>
<td>19.00%</td>
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<tr>
<td>1993</td>
<td>28,214,362</td>
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<tr>
<td>1994</td>
<td>29,002,122</td>
<td>2.00%</td>
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<tr>
<td>1995</td>
<td>29,636,361</td>
<td>2.00%</td>
</tr>
<tr>
<td>1996</td>
<td>30,464,635</td>
<td>2.00%</td>
</tr>
<tr>
<td>1997</td>
<td>30,605,128</td>
<td>0.46%</td>
</tr>
</tbody>
</table>

Source: Las Vegas Convention and Visitor Authority Statistics and Haywood Formula
Vegas results of this Haywood Analysis from 1971-1998. When these figures are examined using the criteria in Figure 4, there are only two periods during the timeframe under study when the percent change does not indicate that Las Vegas was in the growth stage of the PLC. As seen in Table 5, in 1981 and 1982 visitor statistics were down and the percent change from year to year was \(-0.01\%\) and \(-0.03\%\) respectively. These figures indicate that those two years were in the stagnation stage, however historical events such as the advent of Atlantic City, a nationwide recession, and high unemployment help to explain these as an anomaly in relation to the rest of the data set. In 1998, there was another dip, the first since 1983, which indicates Las Vegas has moved from the growth stage to the consolidation stage. This dip was significant due to the fact that the only 0.46% increase in visitor volume from 1997 to 1998 indicates the first slowing of the visitor rate in fifteen years.

Another statistic provided by the Convention Authority was the average dollar contribution per visitor. When these figures are graphed from 1975 to 1998, the line has a positive slope as seen in Figure 13. The line takes a dip in 1998, the first one in several years, as the number of visitors reaches an all time high. Also provided on Figure 13 is the CPI adjusted average contribution per visitor. As was the case with the previously discussed CPI examples, the base period is 1982-1984. This line provides an interesting observation that when inflation was factored into the statistics the amount that people spend on average when making a trip to Las Vegas has remained relatively unchanged for almost 25 years. As a result, for the City to maintain average revenues, a high visitor rate must be sustained.
Figure 13. Average and CPI Adjusted Dollar Contribution Per Visitor
The last statistic to be examined for the City of Las Vegas was the average yearly hotel occupancy percentage. These figures can be seen in Figure 14, but the results are somewhat inconclusive in relation to PLC theory. Many of the studies reviewed in Chapter 2 cited declining occupancy percentages as an indicator for decline in the life cycle. The figures shown in Figure 14 have a few peaks and valleys, but for the most part remain relatively stable. Even though the average occupancy percentage has technically declined slightly in 1997 and 1998, maintaining an occupancy percentage of over 90% can hardly be viewed as decline when compared to national hospitality industry averages.

A summary of the results discussed in this chapter will be presented in Chapter 5. The following chapter will also offer conclusions and recommendations for future related research.
Figure 14. Las Vegas Average Hotel Occupancy Percentage
CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

This chapter summarizes the main findings of the Life Cycle study conducted on the gaming growth of Clark County and draws conclusions as to their meaning and importance. The implications of the visitor statistics for the Las Vegas Strip, Downtown Las Vegas, and City of Las Vegas will be discussed. The chapter will conclude with recommendations for future research.

Conclusions

The purpose of this study was to use PLC theory to judge the growth of gaming in Clark County, Nevada. In order to accomplish this task, two different geographic areas of Clark County as described in the Nevada Gaming Abstracts (1975-1998) were analyzed using PLC: The Las Vegas Strip and Downtown Las Vegas. In addition, Las Vegas visitor statistics provided by the Las Vegas Convention and Visitors Authority were analyzed using PLC. This section will review the results of these three different areas of analysis in order to draw conclusions and interpretations before going on to make comment on the growth of gaming in Clark County in general.
The first geographic area used for analysis was The Las Vegas Strip. As detailed in Chapters 3 and 4, the largest gaming revenue generators for this area were used for analysis, as they represent the vast majority of the revenue being earned. The categories used in The Nevada Gaming Abstracts (1968-1998) to describe these large revenue generators have changed over the years and some categories were combined to benefit the comparability of the data set. A time-series graph of the average total revenue per casino per year was presented in Figures 6 and 7 to show how the resulting line compared to the six-stage life cycle model provided by Butler in Figure 2. From a visual perspective, the resulting line in Figure 6 and the trend line in Figure 7 appear to be in the consolidation or stagnation stage of the Butler model, depending on how the line is viewed. However, when the stage indicators provided by Getz in Table 1 are taken into consideration, it becomes evident that the Las Vegas Strip has met the indicators of the consolidation stage while not yet meeting the indicators for the stagnation stage.

A review of historical events and conditions that have impacted visitor statistics, and therefore total casino revenues, was provided to help explain some of the noticeable changes in the Strip PLC graph. The sharp increase in the average total revenue per casino in 1990 was attributed to both the opening of the Mirage and Excalibur and to the reporting category change made in the Nevada Gaming Abstracts which was detailed in Chapter 3. Following that initial increase, the remainder of the 1990's shows substantial growth both in the number of casinos in the category as well as the average total revenue earned. As mentioned in Chapter 4, the casinos that were constructed in the 1990's were generally built with many more hotel rooms and larger casino space, and it stands to reason average total revenues per casino would rise, as larger facilities stand to make
larger revenues. However, despite that logic, these new casinos would not have made those revenues if they did not attract more visitors. This new era of casinos that provided an upscale “Mega” resort experience did successfully attract many more visitors, and as a result the new casinos changed the standard for new Strip properties. The proof that the market absorbed the increase in the number of properties in the category was evident in the fact that average total revenues continued to rise up until 1997. In 1997 the average total revenue per casino took a dip when the number of casinos in the reporting category increased from 19 to 21—indicating that perhaps the market had reached saturation. However, the average total revenue per casino rebounded in 1998, exceeding all previous average total revenue figures. The Visitors Authority attributes much of the 1998 increase in revenues to the opening of the Bellagio, and with its fine art gallery and gourmet restaurants it seems that the Bellagio has successfully attracted a whole new market segment of the tourist population.

The second geographic area used for analysis was the Downtown Las Vegas area as described in the Nevada Gaming Abstracts (1968-1998). The largest reporting category in the Abstracts from 1975 to 1998 was used to calculate the average total revenue per casino for this area, as detailed in Chapters 3 and 4. The results of the average total revenue per casino calculation for each year are graphed in Figure 9, and a trend line for the data set is shown in Figure 10. A visual examination of the resulting lines shows that Downtown Las Vegas appears to be in the consolidation or stagnation stage of Butler’s six-stage PLC model. Many of the stagnation stage indicators provided by Getz in Table 1 are applicable to the downtown such as: peak visitor numbers reached, capacity limits reached, and the area is no longer fashionable. One example of these indicators for
Downtown was evidenced in 1994 when an almost 20% increase in visitor volume to Las Vegas had virtually no impact on the average total revenue per casino in the Downtown area. On a broader scale, despite a major increase in the number of visitors to Las Vegas in the 1990's, the average total revenue per casino in the Downtown area has remained relatively stagnant since 1990. If anything, the PLC trend line shows a downward trend in the last few years as shown in Figure 10. As a result, from both a visual inspection of the PLC graph and from the stage indicators provided in Table 1, the Downtown area has been in the stagnation stage of the PLC.

Having examined both the Las Vegas Strip and the Downtown Las Vegas, Las Vegas visitor statistics were examined before determinations about Clark County in general were made. The Las Vegas visitor statistics were analyzed using a method suggested by Haywood (1986) and detailed in Chapter 2. The results of this analysis are found in Table 5, and they show that the recent slowing of visitor growth to Las Vegas indicates that the area has moved from the growth stage to the consolidation stage of the Butler six-stage model. The Haywood results, coupled with a the trend line of the visitor statistics seen in Figure 12, indicate that from a visitor growth standpoint, the Las Vegas area was now in the consolidation stage.

In order to draw some general conclusions about the state of gaming in Clark County, the knowledge derived from the three different sets of data needs to be considered together. As the Las Vegas Strip generates significantly more money than the Downtown area, logic dictates that the Strip’s results should be weighed more heavily when making determinations about Clark County in general. In addition, since Las Vegas visitor statistics are not broken down as to the Strip or Downtown, the results from the visitor
statistics analysis are significant as they apply to the entire Las Vegas area. Therefore, the consolidation stage indicators produced by both the Strip and Las Vegas regional visitor statistics overshadow the stagnation stage found in the Downtown area. In addition, the fact that the airport has not reached capacity in terms of the number of visitors it can handle, and that hotel occupancy percentages have remained consistently high are signs according to the Getz indicators that the area was not in the stagnation stage. Therefore, the gaming growth in Clark County can be described as in the consolidation stage of the Butler six-stage model.

With conclusions having been made about the life cycle stage of gaming in Clark County, the significance of these results from a forecasting perspective can be examined. As discussed in Chapter 2, the use of PLC theory as a forecasting tool can improve strategic planning. Nevertheless, the many external forces that can affect the PLC model make it difficult to use. Factors such as the development of other competing destinations, government and political forces, and economic conditions can influence a business tourist area. In the case of Clark County, the expansion of gaming has been a major contributor to the continual growth. In addition, the management decisions made by casino operators and developers can have a major impact on an area. This was one of the areas that needs to be carefully considered in a Clark County study, and this was how the study of gaming growth differs from traditional tourist area destination studies. Casinos are man made attractions not natural ones. As such, new ones can be made, existing ones can be renovated, and old ones can be closed or removed. Casino owners, and more recently large corporations, make these decisions and they can have a major impact on the development of an area. As a result, trying to predict or forecast these decisions has been
virtually impossible. However, PLC theory can help identify trends in the growth of gaming and thereby better understand the current situation. Examining the different measurements of gaming PLC growth, such as the average total revenues per casino, visitor statistics and occupancy percentages helps to raise the awareness of the various factors that can gauge the growth of a casino tourist area. In turn, this information can help in making decisions that will keep the local economy out of the decline stage, such as whether or not to add more rooms or a new attraction.

One example of how life cycle results can be useful can be seen by comparing the average total revenues per casino for the Strip to Baker's 1999 study of Southern Nevada Gross Gaming revenues. As previously shown, the average total revenue per casino for the Strip generally increased over the last thirty years. Even when the figures are adjusted using the CPI as shown in Figure 8, the revenue line still has an upward trend in the last seven years. These results differed quite dramatically from Baker's results, which showed that besides the peak in 1994, the gaming revenues adjusted for inflation declined in the Southern Nevada area during the same period. This was due to the fact that Baker examined only gaming revenues as opposed to the total revenues examined in this study-- which included revenues earned in the casino, food, beverage, rooms, and other areas such as shows and retail. Granted, Baker's results are for a much broader area. However, when they were considered relevant to the Strip area examined in this study, one must conclude that since total average revenues (adjusted for inflation) continued to rise over the last seven years while average gaming revenues (adjusted for inflation) declined, the resorts are making money somewhere other than in the casino. As a result, one can conclude that casinos are making more money in the other categories
included in the definition of total revenue such as: food, beverage, rooms, and other
(shows, retail, etc.). Therefore, casino operators need to be aware of exactly how total
revenues are being generated when deciding what to include in new properties and what
to possibly renovate in existing ones in order to maximize profitability.

Recommendations

This exploratory study attempted to apply PLC theory to various Clark County
historical data in order to analyze the growth of gaming for the area. While the use of
PLC theory was not an exact science, the information obtained in this research effort
helps to better understand where the gaming economy was and what the future may bring
if nothing were done. As a result, this information has raised questions that were beyond
the scope of this study and that could produce beneficial knowledge in the future.

The first recommendation for further study would be to continue the PLC research that
has been covered in this paper. Figures are currently only available through 1998, and
1999 has already shown the opening of three more “Mega” resorts: Mandalay Bay, The
Venetian, and Paris. Moreover, the new Aladdin was currently under construction and
due to open in the year 2000. The impact of these additional competing casinos on the
life cycle graphs of the average total revenue per casino, average occupancy percentages,
and visitor statistics will be very interesting. Will the new casinos significantly
contribute to an increase in total revenue, as seen with the Bellagio, or will they merely
cannibalize business from other casinos? Will the addition of thousands of new rooms
reduce average hotel occupancy percentages? Or, will visitor volume grow to absorb the
increased room inventory in accordance with the availability of these new facilities?
Adding to the data sets that were analyzed in this paper over the next few years will help to answer these questions and gauge the effects that these new casinos will have on the Clark County gaming market.

A second recommendation for research would be to further examine the life cycle model as it pertains to the gaming industry. An argument could be made that a gaming area does not follow the traditional six-stage model proposed by Butler. Referring back to the PLC graph for the Las Vegas Strip in Figure 6, the line has a tendency to grow and then level out and then grow and level out again. This could indicate that gaming as an area never really stagnates or declines, but rather, constantly rejuvenates itself. This hypothesis was based on the fact that casinos are not natural attractions, but man made ones. Therefore, the investment in the casinos can be related to their ability to attract new tourists, thereby affecting the growth of an area. The concept here was that since gaming has been a competitive industry that in recent years has been able to attract large amounts of investment capital, they are able to continually “rejuvenate” the area through renovations, expansions, and new attractions. As a result, it remains possible that a gaming area such as the Las Vegas Strip will skip past the stagnation and decline stages and continually rejuvenate itself. Examples of this include the substantial growth to average revenues with the introduction of new “Mega” resorts in 1990 and 1995, and this was further evidenced by the positive impact of the Bellagio in 1998. In order to test this hypothesis, an examination of other gaming destinations may help to validate or refute this theory. Gaming destinations such as Laughlin, Reno, South Lake Tahoe, and Atlantic City could be examined to test this hypothesis.
Conclusion

The purpose of this study was to analyze the growth of gaming in Clark County using PLC and to use this information to suggest future macro management strategy. Attempting to determine the PLC stage of gaming has proven challenging due to the unique nature of the industry as it relates to the tourist area. Conclusions were made about the PLC stage of gaming for Clark County, and these results led to recommendations for future study. The unpredictability of external influences on the gaming data set, such as corporate management decisions and emerging competitive markets make strategic planning difficult. Nonetheless, this study has shown that the economic vitality of Clark County, especially in the last ten years, has been related to the growth in the size and innovative attractions of casinos. On the Las Vegas Strip, the success of additional casinos and remodeling projects was related to their ability to attract new visitors. The introduction of new kinds entertainment experiences such as the “Mega” resort in 1990 and the upscale Bellagio in 1998 show that to successfully attract visitors, the properties need to offer more than just a casino and rooms, but rather an entire entertainment experience. Therefore, management strategy for future resorts, as well as renovation and expansion projects, needs to focus on providing a variety of attractions and amenities that will continue to attract a multitude of new and return guests.
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p.(2-2), (2-6), (2-8), (2-12), (2-14), (2-18), (2-20), (2-24), (2-26), (2-30)-(2-36).

p.(2-2), (2-6), (2-8), (2-12), (2-14), (2-18), (2-20), (2-24), (2-26), (2-30)-(2-36).

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p.(2-1)-(2-7), (2-41)-(2-47), (2-73)-(2-87), (3-1)-(3-7).

p.(2-1)-(2-7), (2-41)-(2-47), (2-73)-(2-87), (3-1)-(3-7).

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